

ENHANCEMENT OF THE IMMUNE RESPONSE FOR  
VACCINE AND GENE THERAPY APPLICATIONS

ABSTRACT OF THE DISCLOSURE

Expression cassettes are provided comprising a promoter operably linked to a nucleic acid molecule which, when transcribed *in vivo*, forms double-stranded RNA that induces the production of interferon. Expression cassettes also are provided comprising a promoter operably linked to a ribozyme or antisense nucleic acid molecule which, when transcribed *in vivo*, forms a ribozyme or antisense RNA molecule that stimulates an immune response. In addition, expression cassettes are provided comprising a promoter operably linked to a ribozyme or antisense nucleic acid molecule which, when transcribed *in vivo*, stimulates apoptosis. Finally, gene delivery vectors are provided which contain such expression cassettes, host cells containing the gene delivery vectors, and methods of utilizing the expression cassettes, gene delivery vectors, and host cells.